1 **TEMPORAL OPTICAL MODULATION WITHIN AN OPTICAL WAVEGUIDE**
2 .Electro-optic
3 ..Phase modulation type
4 **DIRECTIONAL OPTICAL MODULATION WITHIN AN OPTICAL WAVEGUIDE**
5 .Light intensity dependent (e.g., nonlinear effects)
6 .Magneto-optic
7 .Acousto-optic
8 .Electro-optic
9 ..Coupling between waveguides
10 ..Diffraction grating (e.g., Bragg)
11 **POLARIZATION WITHOUT MODULATION**
12 **OPTICAL WAVEGUIDE SENSOR**
13 .Including physical deformation or movement of waveguide
14 **INTEGRATED OPTICAL CIRCUIT**
15 **WITH OPTICAL COUPLER**
16 .Switch (i.e., switching from one terminal to another, not modulation)
17 ..Matrix switch (i.e., M X N, where M and N are 3 or more)
18 ..Reflective-type switch
19 ..Stationary waveguides with movable opaque element
20 ..Multiple pole multiple throw
21 ...Double pole multiple throw
22 ..Single pole multiple throw (relay switch)
23 ..Single pole single throw
24 .Plural (e.g., data bus)
25 .Movable coupler
26 ..Slip ring
27 .Particular coupling function
28 ..Coupling between modes in a waveguide or fiber
29 ...Mode strippers
30 ..Evanescent wave coupling
31 .Input/output coupler
32 ..Coupling light through a waveguide bend or loop
33 ..Lens
34 ...Rod type
35 ...Spherical
36 ..Prism
37 ..Grating
38 ..End fire
39 .Particular coupling structure
40 ..Electrodes on or near the coupling region
41 ...Directional coupler
42 ..Directional coupler
43 ..Tapered coupler
44 .."T" coupler or duplex coupler
45 .."Y" coupler
46 ..Star coupler
47 ..Multiport coupler using reflective surface
48 ..Access couplers, power tappers, or power dividers
49 ..Fiber to thin film devices
50 ..Waveguide to waveguide
51 .Permanently fixed coupler
52 .With alignment device
53 **WITH DISENGAGABLE MECHANICAL CONNECTOR**
54 .Structure surrounding optical fiber bundle-to-bundle connection
55 .Structure surrounding optical fiber-to-fiber connection
56 ..Multi-part (e.g., two pieces screwed together or bayonet latched)
57 ...Magnetically actuated
58 ...With additional structure at or immediately surrounding each optical fiber end face
59 ....Plural fiber-to-fiber connections
60 ....Fiber end held in ferrule
61 .....Lens-shaped ferrule
62 .....Compressively fixed (e.g., chuck, collet, crimp, set screws, etc.)
63 .....Plate-type holding structure (e.g., jewel)
64 .....Plural rods or balls structure
65 .....Groove-type holding structure
66 .....Tube-type holding structure
67 ......Eccentric arrangement
68 ......Capillary tubes
69 ...With additional structure rearward of fiber joint to secure additional cable layers
70 ..With additional structure at or immediately surrounding each optical fiber end face
71 ...Plural fiber-to-fiber connections
72 ...Fiber end held in ferrule

73 ..With additional optical element between facing fiber ends
74 ...Lens
75 ..With additional nonoptical structure
76 .Optical fiber/optical fiber cable termination structure
77 ..At or immediately surrounding an optical fiber end face
78 ...Fiber end held in ferrule
79 ....Lens-shaped ferrule
80 ....Adhesively fixed
81 ....Compressively fixed (chuck, collet, crimp, set screw, etc.)
82 ....Plural rods or balls structure
83 ....Groove-type holding structure
84 ....Tube-type holding structure
85 ....Fiber/ferrule further processed (grinding, polishing, etc.)
86 ..Structure rearward of optical fiber end face to secure additional fiber or cable layers
87 ...Having at least one layer compressively fixed (e.g., crimp, tightening screws, etc.)
88 .Optical fiber to a nonfiber optical device connector
89 ..Plural fiber/device connections
90 ..Fiber adjustable relative to device
91 ...Fiber permanently fixed after adjustment
92 ..With housing
93 ...Including lens
94 ...Sealed from environment
95 **WITH SPLICE (PERMANENT CONNECTION)**
96 .Fusion splicing
97 .Alignment of fiber ends prior to splicing
98 ..End-to-end (butt) coupling
99 .Including splice joint reinforcement
100 **OPTICAL TRANSMISSION CABLE**
101 .With electrical conductor in the same cable
102 .Tightly confined (i.e., fiber tightly held inside the outer sheath)
103 ..Having a central strength member
104 ..Particular fiber orientation (e.g., helically wound, etc.)
105 ..Compartmentalized
106 ..Plural unit type (plural complete cables within a single outside sheath)
107 ..With armoring
108 ...Prestressed
109 .Loose tube type
110 ..Compartmentalized
111 ..Particular fiber orientation
112 ..Plural unit type
113 ..With strength member
114 .Ribbon cable
115 **OPTICAL FIBER BUNDLE**
116 .Imaging (i.e., with coherent fiber structure and includes shaping, enhancing, and correcting)
117 ..For fiber scope (endoscope)
118 ...With manipulator
119 ..With lens or mirror
120 .Fiber bundle plate
121 .Transition between geometric shapes
122 **HAVING NONLINEAR PROPERTY**
123 **OPTICAL FIBER WAVEGUIDE WITH CLADDING**
124 .With graded index core or cladding
125 .Utilizing nonsolid core or cladding
126 .Utilizing multiple core or cladding
127 ..Concentric
128 ...Where the second or further layer is a coating
129 **PLANAR OPTICAL WAVEGUIDE**
130 .Thin film optical waveguide
131 ..Multilayer structure (mixture)
132 ..Channel waveguide
133 **OPTICAL IMAGING TUNNEL**
134 **ACCESSORIES**
135 .Splice box and surplus fiber storage/trays/organizers/ carriers
136 .External retainer/clamp
137 ..Fiber holder (i.e., for single fiber or holding multiple single fibers together)

138 .Bushing structure (e.g., penetrator)
139 .Plug/termination device
140 .Attenuator
141 **HAVING PARTICULAR OPTICAL CHARACTERISTIC MODIFYING CHEMICAL COMPOSITION**
142 .Of waveguide core
143 ..Organic
144 .Of waveguide cladding
145 ..Organic
146 **NONCYCLINDRICAL OR NONPLANAR SHAPED WAVEGUIDE**
147 **MISCELLANEOUS**

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